

**Appendix A: MITIGATION and MONITORING PROGRAM**  
**SOLEDAD CANYON SAND AND GRAVEL MINING PROJECT**

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
<b>Geotechnical</b>					
G1.	Slope stability in the North Fines Storage Area (NFSA) will be obtained by constructing 2:1 (horizontal to vertical) slopes at 75 percent relative compaction and compacting the outer 30 feet of material on the slope to 80 percent relative compaction. To mitigate the potential for surficial instability, the outer 10 feet of the proposed fill slopes will be constructed with a soil material having minimum strength characteristics of cohesion equal to 175 pounds per square foot (psf) and angle of internal friction equal to 35 degrees or some other alternative soil strength combination that will result in the minimum factor of safety of 1.5.	During mining	County of Los Angeles Department of Public Works	Site Plan review by Agency. Periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to agency.	At regular intervals throughout Project lifetime after NFSA construction begins
G2.	Fill slope stability in the Cut 1 fill area will be obtained by constructing 2:1 (horizontal to vertical) slopes and by achieving 75 percent relative compaction. Benches will be constructed at 15-foot-wide and 90-foot vertical intervals. To mitigate the potential for surficial instability, the outer 10 feet of the proposed fill slopes will be constructed with a soil material having minimum strength characteristics of cohesion equal to 175 psf and angle of internal friction equal to 35 degrees or some other alternative soil strength combination that will result in the minimum factor of safety of 1.5.	During mining	County of Los Angeles Department of Public Works	Site Plan review by Agency. Periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to Agency.	At regular intervals throughout Project lifetime after Cut 3 filling begins
G3.	Ultimately, the former gravel pit high walls will be altered to a 1.15:1 (horizontal to vertical) slope using 15-foot-wide benches at 100-foot vertical intervals. The bottom of the pit walls on the west, north, and northeast sides will be buttressed with fill to provide a buffer zone and increase slope stability.	During mining	County of Los Angeles Department of Public Works	Site Plan review by Agency and periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to Agency.	At regular intervals throughout Project lifetime
G4.	To achieve suitable factors of safety for cut slopes, the following mitigation is presented. For the cut slopes at the northeast portion of the mining area, overall inclinations of the slopes will be flattened	During mining	County of Los Angeles Department of Public Works - Building and Safety	A California-registered engineering geologist shall periodically monitor the cut slope process.	At regular intervals throughout Project lifetime

G5.	Interim mining cuts will be constructed using 35-foot-wide benches over 35-foot elevational changes during the removal of the native material while controlling surface runoff and erosion.	During mining	County of Los Angeles Department of Public Works	A California-registered engineering geologist shall periodically monitor the process.	At regular intervals throughout Project lifetime
G6.	The mining activity will be regularly monitored throughout the life of the Project by a California registered civil engineer or engineering geologist, and periodic testing of the fill materials will be performed to verify strength parameters of the fill soil and relative compaction. The mine operator will maintain all records of correspondence, reports, and designs provided by the registered professional.	During mining	County of Los Angeles Department of Public Works	The following monitoring actions shall be performed under the direction of a California-registered civil engineer or engineering geologist: 1) Periodic testing of fill materials to verify strength parameters of fill soil and relative compaction, 2) Verification of compliance with Mitigation Measures G1, G2, G3, G4, G5, and G7	At regular intervals throughout Project lifetime
G7.	Proposed mining and reclamation specifications and procedures will be in accordance with the County of Los Angeles Planning and Zoning Code, Title 22, Part 9, Chapter 22.56 surface mining permits.	Project startup and during mining	County of Los Angeles Department of Public Works	Site Plan and Reclamation Plan review by Agency and approval and periodic testing of fill materials to verify strength parameters of fill soil and relative compaction by TMC and reported to Agency.	Site Plan and Reclamation Plan review and approval are a condition of approval prior to construction  Periodic testing shall be carried out at regular intervals throughout Project lifetime

Water Resources					
WR1.	TMC will conduct a monitoring program for water resources and sensitive ecological habitats in the immediate vicinity of the Project. The Habitat Protection Plan will include the following components:	Project startup and during mining	State Water Resources Control Board (SWRCB)	Habitat Protection Plan review and approval	Condition of Approval and throughout Project lifetime
	<ul style="list-style-type: none"> <li>a) Four existing monitoring wells will be maintained to monitor water levels of the Santa Clara River underflow during the life of the Project.</li> <li>b) Surface flows of the Santa Clara River will be monitored during the life of the Project at a location(s) to be determined in conjunction with Responsible Agencies prior to the start of mining.</li> <li>c) The riparian and aquatic habitat in the immediate vicinity of the site will be monitored as detailed in the habitat protection plan presented in Appendix F6 of the FEIS.</li> <li>d) The Habitat Protection Plan contains action levels that will trigger adjustments to mining operations to reduce Project water consumption to avoid significant degradation of the ecologically sensitive habitats attributable to the Project. Operational adjustments will include one or more of the following: a) Seasonal sand and gravel production adjustments through stockpiling materials, b) seasonal management of concrete production, c) stockpiling fines temporarily to eliminate water used in the compaction process, d) increased use of dust palliatives for dust control, e) temporary reduction or cessation of pumping of river underflows, and f) cessation of mining operations, if necessary.</li> </ul>			Periodic site visits	

Flood					
F1.	The Project will include construction of seven desilting/debris basins according to the specifications of the Drainage Concept Plan to control surface runoff and sedimentation. During final design, the Applicant shall submit detailed plans for the debris basins including a static and seismic slope study that analyzes all proposed debris basin slopes greater than 3:1 gradient. Plans shall be approved by the DPW prior to the commencement of grading work on the project.	Before project work or mining commences in the catchment area above each watercourse	County of Los Angeles Department of Public Works	Desilting/debris basin design review and approval	Condition of Approval prior to construction
F2.	A 45-inch culvert will be installed under Soledad Canyon Road to accommodate existing runoff conditions as well as conditions for the Project. Construction of desilting/debris Basin 2E and the addition of the 45-inch-diameter culvert under Soledad Canyon Road are Project design features that result in beneficial impacts by correcting inadequate existing conditions.	Project startup	County of Los Angeles Department of Public Works	Design review and approval	Prior to construction
F3.	Proper maintenance and cleaning of erosion control facilities and desilting/debris basins will be conducted as part of the Project operations. Inspection frequencies and maintenance procedures are required by the Stormwater Pollution Prevention Plan (SWPPP) (see Appendix B1 FEIS). These procedures are detailed in the Storm Water Management Practices section of that plan. The following provision will be added to the SWPPP: stormwater desilting/debris basins will be inspected after every storm event and every 24 hours during prolonged storm events. Prevention of spills of hazardous materials, such as petroleum fuels and products, is addressed in the Spill Prevention Control and Countermeasures Plan (SPCCP) (see Appendix B2 FEIS).	During mining	County of Los Angeles Department of Public Works	Monthly inspection of stormwater and erosion control facilities for compliance with SWPPP, by TMC and reported to Agency. Inspections of stormwater desilting/debris basins after every storm event and every 24 hours during prolonged storm events for compliance with SWPPP by TMC and reported to Agency.	Monthly, throughout Project lifetime  After every storm event and every 24 hours during prolonged storm events throughout Project lifetime

Water Quality					
WQ1.	The proposed Drainage Concept Plan will be implemented by TMC. The drainage concept establishes a drainage plan and facility requirements for the project and provides the design parameters for the location, sizing, and scheduling of the erosion control facilities to handle the runoff, sedimentation, and debris flows generated by the Project. The plan addresses drainage during the premining road construction and grading phase, during the mining operation, and after completion of mining.	Project startup and during mining	County of Los Angeles Department of Public Works - Hydraulic/Water Conservation Division	Desilting/debris basin design review and approval by Agency.	Condition of Approval prior to construction, and throughout Project lifetime
WQ2.	TMC will implement provisions of the SWPPP. The SWPPP (1) identifies potential sources of pollutants that will adversely affect stormwater discharges from the site and (2) describes in detail specific best management practices to reduce the levels of pollutants in stormwater discharges. Key elements of the SWPPP include a preventive maintenance program for vehicles and the stormwater conveyance systems, a system of good housekeeping measures to control contamination of runoff, and a system of desilting/debris basins designed for settling out excess suspended sediments in the site runoff, thus controlling downstream sedimentation.	Project startup and during mining	County of Los Angeles Department of Public Works  CRWQCB - Los Angeles Region	SWPPP review and comment by Agency.  Monthly inspection of stormwater facilities for compliance with SWPPP by TMC and reported to Agency.	Condition of Approval prior to construction and throughout Project lifetime

WQ3.	TMC will implement provisions of the SPCCP. Use of secondarily contained aboveground storage tanks (ASTs) to hold dust palliative, diesel fuel, waste oil, fresh motor oil, and hydraulic fluid onsite will minimize exposure of these products to surface water and groundwater. As previously stated, the risk of undetected leaks is much smaller with ASTs than with underground storage tanks (USTs). Additionally, the SPCCP identifies procedures and controls that will be implemented over the life of the Project to prevent and minimize the release of chemicals into the area's surface waters. The SPCCP's main focus is storage of diesel, hydraulic oil, motor oil, and waste oil in all ASTs having capacities of greater than 55 gallons (no USTs are planned for the facility). However, areas of the site designated for storage of smaller volumes of potentially hazardous materials (e.g., solvents and cleaners) are also covered in the SPCCP. General compliance requirements relating to facility operations that are addressed in the SPCCP include spill response, leaks and malfunctions, rainwater accumulation, inspection, changes, training, and recordkeeping.	Project startup and during mining	County of Los Angeles Department of Public Works  CRWQCB - Los Angeles Region	SPCCP review and comment by Agency. Annual inspection of ASTs and spill containment facilities for compliance with SPCCP by TMC and reported to Agency.	Condition of Approval prior to construction and throughout Project lifetime
WQ4.	The proposed onsite sanitary septic tank leach field will be built following County review and approval of the location to ensure that there will be no possible impact on water quality. If an appropriate onsite location for the leach field is not found because of the presence of impermeable soils, fractured rock, or other geotechnical limitations, TMC will install a septic tank onsite that is designed for routine pumpout.	Project startup	County of Los Angeles Department of Public Works	Site visit, review and testing for suitable location of septic tank leach field	Prior to construction
WQ5.	Desilting/debris basins will not be removed until disturbed areas have been successfully revegetated.	During mining and following mine closure	County of Los Angeles Department of Public Works	Site visit and review following each reclamation phase/ prior to removal of associated sediment retention basin	Prior to removal of sediment retention basins

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
<b>Noise</b>					
N1.	<p>The Applicant will conduct blasting operations in general conformance with the federal OSMRE regulations as stated in 30 CFR, Chapter VII, Sections 816.61 through 816.68, and other applicable regulations. Conformance shall be demonstrated through preparation of a detailed Blasting Plan identifying project compliance with the stated requirements (as minimum standards) and through monitoring of blasting activities. The Blasting Plan shall be reviewed and approved by the County prior to conducting any blasting onsite. The Blasting Plan shall provide for the following:</p> <ol style="list-style-type: none"> <li>Submission and approval by the County of the specific blast design prior to blasting, where such blasting will occur within 1,000 feet of habitable buildings outside the permit area.</li> <li>Conducting a public awareness program, including notification of all residents within mile of any part of the permit area of the opportunity to request a preblast survey. The notification is to be done at least 30 days prior to initiation of blasting. A TMC information officer who can be contacted by telephone for information will be designated.</li> <li>Publication of the anticipated blasting schedule at least 10 days prior to the beginning of the blasting program via a newspaper of general circulation in the Project area and by direct mail to residents within mile, and republication at least every 12 months or whenever substantive changes to the schedule are to be implemented.</li> <li>Placement of warning signs and access controls to blast areas.</li> <li>Incorporation of the provision that blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in course, channel, or availability of surface or groundwater outside of the permit area.</li> </ol>	Project startup and during mining	<p>County of Los Angeles Department of Public Works</p> <p>Office of Surface Mining Reclamation and Enforcement (OSMRE)</p> <p>Mine Safety and Health Administration (MSHA)</p>	<p>The Blasting Plan is subject to review and approval by the LADPW, OSMRE, and MSHA</p> <p>Specific blast designs are subject to LADPW approval</p>	Prior to blasting operations

	<p>f. Conducting blasting so that the maximum air overpressure shall not exceed 133 dB (2-Hz minimum) measured directly between the nearest occupied residence and the blast site (ref. U.S. Bureau of Mines Report of Investigations 8485 (1980) "Structure Response and Damage Produced by Airblast from Surface Mining").</p> <p>g. Conducting blasting so that the peak particle velocity generated from any blast shall not exceed 0.5 in/sec for vibration frequencies below 40 Hz, and 2.0 in/sec for vibration frequencies of 40 Hz or more, measured directly between the nearest residence and the blast site (U.S. Bureau of Mines 1980b). Other methods of determining acceptable particle vibration such as the use of scaled-distance equations shall be allowed subject to approval by the County.</p> <p>h. Conducting periodic monitoring offsite to ensure compliance with airblast and vibration standards and provide a seismograph record of each blast. Monitoring shall be conducted at a representative residential receptor and at a representative location adjacent to the Santa Clara River riparian habitat.</p> <p>i. Controlling flyrock at the blast site in accordance with OSMRE regulations. That is, flyrock traveling in the air or along the ground shall not be cast from the blasting site.</p> <p>j. Maintain records as specified by the County of all blasts for a minimum 3-year period.</p> <p>k. Identification of conditions when blasting will be curtailed, including atmospheric conditions that are conducive to transmission and amplification of noise offsite, and/or conditions conducive to the transport of high levels of fugitive dust emissions offsite. The Blasting Plan will identify such conditions where blasting is to be curtailed by the Applicant. The program shall also specify the candidate control measures specifically aimed at reducing blasting fugitive emissions.</p> <p>l. Identification of other parameters affecting blasting such as the regulatory requirement that blasting be conducted during daylight hours. Blasting shall be prohibited on Sundays and specified holidays.</p> <p>m. Implementing specific measures to prevent nitrate contamination of surface and groundwater due to use of ANFO.</p>				
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N2.	Based on the proposed lot configurations of the proposed Bee Canyon Mobile Home Park, trailers located west of the westernmost boundary of the TMC Project may be subject to significant noise during Mining Cut 3 operations. If the Bee Canyon Mobile Home Park is constructed, the noise impact will be reduced to less than significant by constructing berms or cut slopes to shield lots from direct noise exposure as confirmed through acoustic evaluation (based on final grading contours of the Bee Canyon project). It is anticipated that these measures would be applicable only if the Bee Canyon Park were actually constructed. If a soundwall is to be constructed, a detailed study will be conducted by qualified personnel in the fields of structural engineering, environmental noise assessment, and architectural acoustics.	Prior to implementation of Cut 3 if Bee Canyon Mobile Home Park is constructed.	County of Los Angeles Department of Public Works	Berm design review and approval	Once, prior to implementation of Cut 3 if Bee Canyon Mobile Home Park is constructed
N3.	At the River's End Trailer Park and the Bee Canyon Mobile Home Park, if constructed, soundwalls or berms will be constructed adjacent to affected lots to mitigate offsite truck transportation noise.	Prior to Project implementation	County of Los Angeles Department of Public Works	Berm design review and approval	Once, prior to Project implementation

Public Services					
PS1.	Fire prevention training for all employees will be conducted based on Cal-OSHA standards, and fire prevention equipment will be available onsite.	Throughout project	Occupational Safety and Health Administration (OSHA)  Los Angeles County Fire Department (LACFD)	The Project site shall be subject to unscheduled visits by OSHA and/or LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during Project construction and mine operations
PS2.	No explosives will be stored onsite.	During mining	OSHA  LACFD	The Project site shall be subject to unscheduled visits by OSHA and/or LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS3.	The water storage facilities onsite will be accessible to fire equipment by an all weather road capable of supporting 50,000 pounds. The road width should be a minimum of 26 feet within 25 feet of either side of the tank connection.	During mining	LACFD	The Project site shall be subject to unscheduled visits by LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS4.	The water storage tanks should have a 4 inch and 2.5 inch outlet with National Standard threads. These outlets should be no more than 6 feet from the road.	During mining	LACFD	The Project site shall be subject to unscheduled visits by LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS5.	The minimum road width shall be 20 feet throughout the mining operation and must reach to within 150 feet of all buildings and equipment.	During mining	LACFD	The Project site shall be subject to unscheduled visits by LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS6.	Grades on gravel roads should not exceed 10 percent. If they are paved, then a 15 percent grade is acceptable.	During mining	LACFD	The Project site shall be subject to unscheduled visits by LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
PS7.	Turnarounds should be provided on any road that exceeds 300 feet or one every 0.25 mile to 0.5 mile. The minimum radius is 32 feet.	During mining	Los Angeles County Fire Department (LACFD)	The Project site shall be subject to unscheduled visits by LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations

PS8.	A minimum 200-foot fuel break will be provided around any mining operation.	During mining	LACFD	The Project site shall be subject to unscheduled visits by LACFD inspectors to ensure compliance with the fire prevention regulations	At any given time during mine operations
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Air Quality					
AQ1a.	Construction Exhaust Emissions. Mitigation for both heavy equipment and vehicle travel is limited. However, the following will be employed to reduce these emissions to the maximum extent feasible:	During mining	County of Los Angeles/BLM	Applicant will maintain maintenance and operating logs of pertinent equipment for agency review	At annual SMARA compliance inspection
	<ol style="list-style-type: none"> <li>1. maintain equipment in tune per manufacturer's specifications;</li> <li>2. use catalytic converters on gasoline-powered equipment;</li> <li>3. retard diesel engine timing by 4 degrees;</li> <li>4. install high-pressure fuel injectors;</li> <li>5. use reformulated, low-emission diesel fuel;</li> <li>6. substitute electric and gasoline-powered equipment for diesel-powered equipment where feasible;</li> <li>7. where applicable, do not leave equipment idling for prolonged periods; and</li> <li>8. curtail (cease or reduce) construction during periods of high ambient pollutant concentrations (i.e., Stage II smog alerts).</li> <li>9. retard fuel injection timing, resulting in NO<sub>x</sub> reduction of 30 percent (&gt;40 percent in AP-42);</li> <li>10. use high-pressure fuel injectors resulting in PM-10 reduction in excess of 80 percent with a reduction in hydrocarbons; and</li> <li>11. use low-emission fuels resulting in unquantified reductions in all emissions.</li> </ol>				
AQ1b.	Construction Fugitive Dust Emissions. Although dust impacts are not expected to be significant during the construction phase, Project design standard measures will be implemented to control fugitive dust emissions during construction as required by SCAQMD Rules 402 and 403. These rules contain a nuisance provision that gives an SCAQMD inspector wide latitude to enforce dust abatement, particularly in the event of a nuisance complaint. Because of the extreme distances from sensitive receptors, no nuisance complaints are anticipated. Still, typical abatement measures, including daily watering of active construction areas and all traveled dirt roads to minimize dust lofting from vehicular disturbance, will be used.	During construction	SCAQMD	<p>Review and approval of Fugitive Dust Plan</p> <p>Investigation of complaints</p>	<p>Fugitive Dust Plan will be reviewed annually</p> <p>As required throughout Project lifetime</p>

	<p>The Project is subject to this Rule 403 and will prepare a fugitive dust plan that will be reviewed and approved by the SCAQMD on an annual basis. The Plan will include Best Available Control Measures (BACM) and the regulation prohibits both visible dust and PM-10 concentrations in excess 50 g/m<sup>3</sup> at the Project boundary. The Project will comply with the Requirements of Rule 403.</p>				
AQ1c.	<p>Operations Exhaust Emissions. In addition to the mitigation measures presented for onsite operations, TMC has made a commitment to reduce traffic congestion by providing the transit improvements as stated in Section 3.1.7.1 of the FEIS. Because most of the trucks will be independently owned and operated, the Applicant has little control over these emissions. Still, the Applicant does have some control over these emissions while the trucks are onsite and in the selection of the owner-operators. Applicable mitigation then includes the following:</p> <ol style="list-style-type: none"> <li>1. Trucking will be performed on a 24-hour-per-day basis. This will reduce emissions by allowing trucks to operate during non-peak hours, increasing truck speeds, and eliminating prolonged idling in traffic, thereby decreasing truck emissions.</li> <li>2. When operating onsite, trucks will not be left idling for prolonged periods.</li> <li>3. Applicant-operated trucks that are observed to emit excessive amounts of smoke (particulate matter) will either be tuned up or repaired, as applicable. Private owner-operators will be warned that, if their trucks emit excessive amounts of smoke, they will not be allowed future access to the facility.</li> <li>4. Where applicable, high-pressure fuel injector nozzles will be used, and diesel engine timing will be retarded by 4 degrees. (This includes both trucks and heavy equipment.)</li> </ol>	During operations	County of Los Angeles/BLM	Applicant will maintain a log demonstrating compliance with this requirement	At annual SMARA compliance inspection

AQ2.	<p>PM-10 dust emissions are also anticipated to create a significant impact for both Phases 1 and 2.</p> <p>The Project is subject to this Rule 403 and will prepare a fugitive dust plan that will be reviewed and approved by the SCAQMD on an annual basis. The Plan will include Best Available Control Measures (BACM) and the regulation prohibits both visible dust and PM-10 concentrations in excess 50 g/m<sup>3</sup> at the Project boundary. The Project will comply with the requirements of Rule 403.</p> <p>Mitigation measures and control efficiencies for each dust-generating operation are presented in FEIS Appendix E2. These measures will be incorporated into the Rule 403 Fugitive Dust Plan.</p>	During mining	SCAQMD	<p>Review and approval of Fugitive Dust Plan</p> <p>Investigation of nuisance complaints</p>	<p>Fugitive Dust Plan will be reviewed annually</p> <p>As required throughout Project lifetime</p>
AQ3.	<p>To further reduce PM-10 emissions, TMC shall use a semi-stationary "fines" conveyor system to move fines from the mobile crusher, located in the active mining area, directly to the NFSA. This fines conveyor shall extend along the haul road to the NFSA. A mobile conveyor shall be located in the NFSA and will tie in to this stationary fines conveyor thereby allowing fines to be distributed throughout the NFSA without the need for subsequent trucking of this material.</p> <p>The mobile crusher has the ability to remove almost all of the fines during the crushing procedure. This crusher shall be equipped with two separate mobile conveyor systems. One of these mobile conveyor systems will transport fines removed in the initial crushing process to the main (stationary) fines conveyor and subsequently to the NFSA. The other mobile conveyor will transport excavation products to the main product conveyor which takes it to the rock plant for further processing.</p> <p>Not all of the fines are removed at the mobile crusher and the rock plant also produces a modicum of fines during the processing procedure. These fines will be hauled by dump truck from the rock plant back to the stationary fines conveyor where it meets the haul route. From this point the fines will then travel along the stationary fines conveyor to the NFSA. Transfer points on the conveyor will be controlled by wet suppression.</p>	During mining	County of Los Angeles/BLM	Permit Condition, incorporate into approved Plan of Operations	Review and approval of Plan of Operations and annual compliance review as part of the annual SMARA compliance inspection.

AQ4.	<p>For equipment falling in the appropriate horsepower ranges, the Project will use equipment which meets EPA/CARB standards (see Section 3.1.18 of the FEIS). For Phase 1, the minimum standards which would apply would be the 1996 standards for 175-750 hp engines and the 2000 standards for equipment rated &gt;750 hp. Additional equipment purchased for Phase 2 of the Project will meet the year 2001 standards for 175-750 hp.</p> <p>Equipment built to meet EPA/CARB certified engine standards incorporates a number of combustion system improvements. Therefore mitigation measure AQ1 involving retarding diesel engine timing by 4 degrees and installing high-pressure fuel injectors would not be applicable to this equipment.</p>	During mining	County of Los Angeles/BLM	Applicant will maintain a log of onsite equipment specifications that demonstrates compliance with this measure.	At annual SMARA compliance inspection
AQ5.	<p>Based on currently available technology, TMC proposes to install particulate filters that achieve 95 percent or greater reduction in diesel exhaust particulates on the following equipment:</p> <p>Phase 1: 13 cu. yd. pit loader; two, 100-ton haul trucks; and water truck  Phase 2: two, 13-cu.yd. pit loaders; four, 100-ton haul trucks; water truck; two front end loaders; and 35-ton dump truck.</p> <p>Since diesel exhaust has recently begun to receive a high degree of attention, significant advances in control technology for heavy equipment are anticipated in the future. As these advances take place, TMC will review new technologies for their feasibility and applicability. Alternative methods for achieving equivalent or better diesel particulate reductions may be implemented in place of particulate filters. These alternatives may include:</p> <p>Conversion of some equipment to alternative or dual-fuel technology, if this becomes feasible.</p> <p>Purchasing lower emitting equipment, if it becomes available when new purchases are being considered.</p> <p>Use of low sulfur diesel, if it becomes available.</p>	During mining	County of Los Angeles/BLM	Applicant will maintain a monthly log of equipment operating hours and will implement control measures when annual emissions approach the required threshold.	At annual SMARA compliance inspection

<b>Air Conformity Stipulations (not included in AQ mitigation measures)</b>					
	SCAQMD Permits for onsite stationary sources	Prior to operation at the site	SCAQMD	Obtain valid Permit to Construct or Permit to Operate for all stationary equipment prior to operations	Annual reporting required to and periodic inspections by SCAQMD
<b>BIOTA</b>					
B1.	The impacts associated with the loss of natural vegetation communities and wildlife habitat in the Project area are less than significant with implementation of the Reclamation Plan. The Reclamation Plan provides for concurrent revegetation of the site with species presently found onsite. The Reclamation Plan outlines revegetation specifications and establishes performance criteria for success of revegetation of the site.	During mining operations and after mine closure	County of Los Angeles Department of Public Works	Onsite verification of completion of performance criteria for successful site revegetation as set forth in the reclamation plan (Section 2.2)	During concurrent mining reclamation processes and completion of the final reclamation plan
B2.	Significant impacts on the sensitive plant species (Peirson's morning glory, slender mariposa lily, Plummer's mariposa lily, and club-haired mariposa lily) in the northwestern region of the Project site due to fines placement and potentially from placement of desilting/debris Basins B and C will be mitigated by the following actions. Seeds of these sensitive species shall be collected from impacted populations as fines storage proceeds, and the seeds shall be incorporated into the Revegetation Plan for the site. These plant species, especially Peirson's morning glory, are found in areas that have experienced disturbance such as fire or clearing. Therefore, incorporating the seed of these species into the revegetation plan for the site will provide a means to salvage the populations, and impacts on these species will be reduced to less-than-significant levels.	Following mine closure	County of Los Angeles Department of Public Works	Onsite verification of completion of successful sensitive plant species site revegetation as set forth in reclamation plan (Section 2.2)	As required following completion of mining operations and final reclamation (after 20 years)
B3.	Potential significant impact on the coastal western whiptail will be reduced to nonsignificant with the implementation of the Reclamation Plan. This species is often associated with disturbed sites, and implementation of the Project would not result in a permanent loss of its habitat.	Following mine closure (20 years)	County of Los Angeles Department of Public Works	Onsite verification of presence of suitable coastal western whiptail habitat following reclamation	Following completion of mining operations and final reclamation (after 20 years)
B4.	Impacts from stray lighting from facilities and equipment yards will be reduced with the use of low-intensity lighting and direction shields. This will reduce the level of impact to less than significant.	Project construction	County of Los Angeles Department of Public Works	Onsite visit and photic evaluation.	After lighting is installed during Project construction



B5.	Potential impacts on the Santa Clara River biological resources from uncontrolled surface runoff from the site will be mitigated through implementation of project design measures including construction and maintenance of seven desilting/debris basins and implementation of the Project SWPPP and SPCCP.	Project lifetime (20 years).	County of Los Angeles Department of Public Works  CRWQCB	SWPPP and SPCCP review and approval  Monthly inspection of stormwater facilities for compliance with SWPPP	Condition of Approval prior to construction and throughout Project lifetime
B6.	<p>Potential impacts on riparian habitat and proposed critical habitat of the unarmored threespine stickleback and regionally sensitive riparian vegetation from uncontrolled pumping of underflows of the Santa Clara River will be mitigated through implementation of the Habitat Protection Plan previously described in water resources. The monitoring plan will be a multifaceted program of water resource monitoring and habitat monitoring of the permanent flowing stickleback habitat downstream from the site, as well as seasonal habitat adjacent to and downstream of the site. The habitat protection program is presented in detail in FEIS Appendix F6. The monitoring program will contain action levels based on habitat requirements for the unarmored threespine stickleback and riparian vegetation. These action levels will trigger adjustments to mining operations to reduce project water consumption, including the temporary cessation of pumping if necessary. In response to below-seasonal average rainfall, mining operations will be adjusted during the dry season to reduce water consumption. Operational adjustments will include one or more of the following:</p> <ul style="list-style-type: none"> <li>a) seasonal sand and gravel production adjustments,</li> <li>b) seasonal management of concrete production,</li> <li>c) temporary stockpiling of fines,</li> <li>d) increased use of dust palliatives,</li> <li>e) temporary reduction or cessation of pumping of river underflows, and</li> <li>f) cessation of mining operations, if necessary.</li> </ul>	Project lifetime	U.S. Fish and Wildlife Service (USFWS)	Approval of Habitat Protection Plan and unscheduled regulatory site inspections	Periodically, throughout Project lifetime
B7.	The western-most ephemeral drainage located in the NFSA, if determined to be jurisdictional waters, will be avoided in the western end of the NFSA by limiting the lateral placement of fines.				

Biological Opinion Terms and Conditions					
BO1.	The measures proposed by TMC in the biological assessment and summarized in the biological opinion (FEIS Appendix F11) are incorporated as terms and conditions of the biological opinion and shall be included by the BLM as conditions of the mining and reclamation plan for the proposed action.	During preparation of the Mining and Reclamation Plan	BLM	Review by Agency of Mining and Reclamation Plan to ensure that biological mitigation measures are included	As required during preparation of the plan
BO2a.	If the water quality and quantity parameters reach the action levels defined in the biological opinion (table titled Comparison of Unarmored Threespine Stickleback Habitat Requirements and Monitoring Plan Action Levels) the BLM shall require TMC to notify the appropriate BLM office and to cease pumping water from the alluvium of the Santa Clara River until the action levels defined in the table are again achieved.	Project lifetime	BLM  USFWS	Review by Agency of Mining and Reclamation Plan  Report of water quality and quantity monitoring data by TMC review and by Agency	As required during Project lifetime
BO2b.	If pumping has been suspended until at least the water quality and quantity standards defined by the action levels are once again achieved, the BLM shall limit the amount of water pumped from the alluvium of the Santa Clara River by TMC to a rate and amount that will not result in fluctuations of the water level, water temperature, or oxygen level. This limitation shall remain in effect until the onset of rains during the next wet season.	Project lifetime, after implementation of measure BO2a.	BLM	Review by Agency of Mining and Reclamation Plan  Report of water quality and quantity monitoring data by TMC. Site visits by Agency as required	As required from the implementation of measure BO2a to the onset of rains during the next wet season
BO3.	The BLM shall ensure that TMC uses only herbicides approved for spraying in and near aquatic sites, such as Rodeo, within 100 feet of the Santa Clara River when water flow is present in the river. Other herbicides may be used, according to their label restrictions, to control giant reed on upper floodplain terraces.	Project lifetime	BLM	Review by Agency of Mining and Reclamation Plan  Site visits by Agency as required	As required during the preparation of the plan  Site visits as required during Project lifetime
BO4.	The BLM shall require TMC to prepare an annual report for its review by December 1 of each year the mine is in operation or reclamation phases. After BLM's review, the report shall be forwarded to USFWS by January 15. The report shall document the effectiveness of the monitoring plan proposed by TMC and the terms and conditions, a summary of the information that was collected regarding water quality and quantity from the previous year, a summary of the results obtained from the habitat monitoring, and the results of any work to remove exotic species. If appropriate, the report shall also recommend modifications to the monitoring plan and terms and conditions to enhance the protection on unarmored threespine stickleback while making them more workable for TMC and the BLM.	Project lifetime	BLM  USFWS	Annual Monitoring Report by TMC  Review of Annual Monitoring Report by Agencies	Annually by December 1 (BLM) and January 15 (USFWS)

BO5.	On locating dead unarmored threespine sticklebacks, initial notification must be made in writing to the USFWS Division of Law Enforcement and by telephone and writing to the Ventura Field Office within three working days of its finding. The report shall include the date, time, location of the carcass, a photograph, cause of death, if known, and any other pertinent information. Care shall be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. The remains of unarmored threespine sticklebacks shall be placed with the Los Angeles County Museum of Natural History. Arrangements regarding proper disposition of potential specimens shall be made with the museum by the project monitor prior to implementation of the action.	Project lifetime	BLM  USFWS	Report by TMC  Review of report by Agencies	Within 3 working days of location of dead unarmored threespine stickleback
BO6.	The BLM and TMC will remove other exotic species from the habitat of the unarmored threespine stickleback when possible. In particular, any individuals of the African clawed from that are encountered should be destroyed.	Project lifetime	BLM  USFWS	Report by TMC  Review of Report by Agencies	Annually by December 1 (BLM) and January 15 (USFWS)

<b>Cultural Resources</b>					
CR1.	Under current construction plans, the historic archaeological site (LAN-1847H) will be avoided. However, to ensure that the site is not disturbed by construction activities, the site will be fenced under the direction of an archaeological monitor. With this measure, the site will be avoided and protected, which is a preferred mitigation measure.	Project Design and Construction	California Office of Historic Preservation	Representative archaeological monitor shall review site plan and direct the manner in which the archaeological site LAN-1847 shall be fenced and avoided	As required during Project construction
CR2.	If under future construction plans the site cannot be avoided and protected, an archaeological test program that includes archival research will be necessary to determine the site's importance. If the site is found to be important, a data recovery program will be implemented to mitigate impacts on a less-than-significant level	Prior to disturbance of the site	California Office of Historic Preservation	Representative archaeological monitor shall conduct an archaeological test program including archival research to determine significance of site and need for excavation	At such time that avoidance of historic archaeological site LAN-1874H becomes infeasible

Visual Qualities					
VQ1.	Reclamation and revegetation will occur starting every growing season after mining activity has ceased in particular areas.	Project lifetime and following mine closure	County of Los Angeles Department of Public Works	Onsite verification of completion of performance criteria for successful site revegetation as set forth in the reclamation plan (Section 2.2)	During concurrent mining reclamation processes and upon completion of the final reclamation plan
VQ2.	During the final phase of reclamation, the roads will be resloped to conform with the surrounding topography.	Final phase of reclamation (after 20 years)	Los Angeles County Department of Public Works	County Landscape Engineer shall monitor resloping practices	Following mine closure during final phase of reclamation
VQ3.	Reclamation of the NFSA will include grouping of revegetation to mimic existing topography and contouring to add dimension to the filled slopes.	Final phase of reclamation (after 20 years)	Los Angeles County Department of Public Works	County Landscape Engineer shall monitor revegetation practices	Following mine closure during final phase of reclamation
VQ4.	The Project will incorporate modern lighting systems that direct light to specific areas and prevent stray lighting from spilling onto surrounding areas. No lighting will be directed upward.	Project design and stage 4 of construction (1-2 years)	Los Angeles County Department of Public Works	County Engineer shall review the project site plan and inspect lighting following installation	During project design and stage 4 of construction

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
<b>Traffic</b>					
T1.	<p>The TMC Project does not generate significant Project-specific impacts. However, mitigation measures are required for the Soledad Canyon Road/Antelope Valley Freeway NB and SB ramps intersections, and the east approach of Soledad Canyon Road to the Bee Canyon Mobile Home Park's most easterly access road that were determined to have significant cumulative impacts. The roadway improvements and traffic signal controls required to achieve an acceptable LOS are presented in Table 3.1.11-15. These improvements will be required with or without the Project if the other related projects are developed as currently proposed. It is recommended that the intersection traffic volumes be monitored by County Public Works and Caltrans to determine if and when the mitigations are required.</p> <p>Pursuant to Los Angeles County Traffic Impact Analysis Guidelines (DPW 1997), the Project's pro-rata percent share of the improvements is 9.1 percent to widen and modify the east approach of Soledad Canyon Road to provide two through lanes and one exclusive right-turn lane (add one westbound through lane). TMC's pro-rata shares of the traffic signal installation costs will be 6.5 percent of the cost for the intersection at SR-14 SB ramp/Soledad Canyon Road, and 9.1 percent of the cost at SR-14 NB ramp/Soledad Canyon Road. This share was determined based on the average of the a.m. and p.m. peak hour traffic volumes entering the interchange.</p>	Project lifetime if required	<p>Los Angeles County Department of Public Works - Traffic Division</p> <p>California Department of Transportation (Caltrans)</p>	<p>Traffic volumes shall be periodically monitored throughout project lifetime to determine need for roadway improvements</p> <p>If improvements are required, TMC will pay its pro-rata share of the improvements as stated in Mitigation Measure T1</p>	<p>Traffic volumes will be measured throughout Project lifetime</p> <p>If and when improvements are required TMC shall pay its pro rata share</p>

T2.	<p>Access to the site is proposed to be relocated from its existing location on Soledad Canyon Road to a point opposite of the existing access road for the C.A. Rasmussen mining operations. This would create a conventional four-way intersection on Soledad Canyon Road. The Project will provide one shared left-turn/through lane and one exclusive right-turn lane on the north approach and aligned with the existing access road for the C.A. Rasmussen facility. A left-turn lane and one shared through/right-turn lane on both the east and west approaches on Soledad Canyon Road will be provided. The westbound merging lane will be designed with adequate sight distance to the satisfaction of the County Department of Traffic and Lighting.</p>	Project lifetime	LA County Department of Public Works - Traffic Division	<p>County Engineers shall: 1) review and approve planned access roadway improvements and 2) Monitor traffic volumes to determine need for traffic signal installation</p> <p>If improvements are required, TMC will pay its pro-rata share of the improvements as stated in Mitigation Measure T2</p>	<p>During project design phase and construction for planned access roadway improvements</p> <p>Traffic volumes shall be measured throughout the Project lifetime</p> <p>If and when traffic signal installation becomes necessary, TMC shall pay its pro-rata share</p>
	<p>All striping improvements will also be approved by the Department. Some trees and shrubs to the east and west of the access road will be cleared, as necessary, to afford an unimpeded view of oncoming traffic.</p> <p>If and when actual traffic conditions would warrant a traffic signal, TMC's pro-rata shares of the traffic signal installation costs for the Project access road/Soledad Canyon Road intersection will be 100 percent.</p>				
T3.	<p>The Applicant will contribute its fair share of costs to resurface the specific section(s) of pavement on Soledad Canyon Road. Paving shall be accomplished prior to the start of Phase 2 or at a later date as substantiated with a revised traffic index analysis which includes trucks generated by other projects.</p>	Prior to Phase 2 mining operations (within 10 years)	LA County Department of Public Works - Traffic Division	The LA County Department of Public Works - Traffic Division will monitor road quality and determine when repaving is necessary	Prior to Phase 2 mining operations (within 10 years)

Land Use					
LU1.	<p>No mitigation measures are required because no significant adverse impacts were identified. However, as a condition of TMC's Project, the County will review and approve the proposed Reclamation Plan to reclaim mined lands to a usable condition. Under the proposed Reclamation Plan, at the conclusion of the Federal Contracts, TMC will reclaim the TMC's Project processing site and/or all inactive disturbed areas. Any areas not used for continued mining will be reclaimed and revegetated for use as open space. Upon approval of all applicable permits and plans, the Project will be deemed consistent with state, regional, and local land use policies and designations.</p>	During project design phase.	LA County Department of Public Works	The LA County Department of Public Works shall review and approve the proposed Reclamation Plan	During project design phase, prior to construction

No.	Mitigation Measure Description	Time Frame For Implementation	Monitoring Agency	Verification/ Monitoring Action	Timing of Verification
<b>Public Health and Safety</b>					
PHS1.	Detailed emergency plans are presented in the SPCCP and will be strictly followed.	Project lifetime	CRWQCB  Occupational Safety and Health Administration (OSHA)	Review and comment.  The Project site shall also be subject to unscheduled site visits by CRWQCB and OSHA inspectors	During development of SPCCP and throughout Project lifetime
PHS2.	All Mine Safety and Health Administration (MSHA) and other applicable regulations will be strictly enforced.	Project lifetime	MSHA	Project site shall be subject to unscheduled visits by MSHA inspectors to ensure compliance with MSHA regulations	Throughout Project lifetime
PHS3.	Public access will be restricted to reduce the potential for accidents. Active mining areas will be fenced, and signs will be posted restricting access to Project site.	Project lifetime	MSHA	MSHA inspectors shall verify proper public access restriction measures are in place during unscheduled site visits	Throughout Project lifetime
PHS4.	The facility will be gated to control public access.	Project lifetime	MSHA	MSHA inspectors shall verify proper public access restriction measures are in place during unscheduled site visits	Throughout Project lifetime
PHS5.	Compliance with all regulations and requirements of OSHA, MSHA, and all applicable County 1994 Uniform Fire Codes will be observed.	Project lifetime	MSHA  OSHA  LACFD	Unscheduled site visits by OSHA, MSHA, and LACFD to ensure compliance with all applicable safety regulations and fire codes	Throughout Project lifetime
PHS6.	TMC will not remove topsoil on high wind days	Project lifetime	SCAQMD	Periodic review and approval of Fugitive Dust Plan by Agency.	At regular intervals throughout Project lifetime